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EFFECTS OF ENVIRONMENTAL CROWDEDNESS ON OFFLINE AND ONLINE WORD OF
MOUTH MARKETING

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Abstract

Consumers engage in WOM in social settings, which includes crowded settings. This research investigates WOM in crowdedness and other possible influential factors such as comfort, people in the crowd and personality traits. I propose that people who are comfortable, accompanied or extraverted will engage in offline WOM. While people who are uncomfortable, alone or introverted will prefer online WOM as it gives them an opportunity to immerse in their mobile phones. A study was conducted in an organic crowd. The results demonstrate relationships between crowdedness and WOM with potential significant results when considering larger samples in future research.

Keywords: Offline WOM, Ewom, SNSs and Crowdedness

Introduction

Word-of-Mouth Marketing (WOM) can be defined as “*informal, person-to-person communication between a perceived non-commercial communicator and a receiver regarding a brand, a product, an organization or a service*” (Harrison-Walker 2001, p 63). The effects and motivations behind WOM have been studied (Hennig-Thurau 2004, Sundaram et al. 1998). However, the drivers of WOM have received less attention from researchers with exceptions (Barasch and Berger 2014, Berger and Schwartz 2011).

One of the drivers with limited research, is the environment in which WOM takes place. Nevertheless, the environment does affect consumer choices (Maeng et al. 2013) such as consumer satisfaction (Iacobucci et al. 1995) and consumer behavior (Bitner 1992). Therefore, the environment in which WOM occurs is also influential (McKinsey 2010). Several unanswered questions remain regarding environment as a WOM driver. Some of the unanswered questions include: are people in crowds engaging in WOM? With whom are they sharing? Do they share positive or negative WOM? Why are they sharing information? The first and later question are already explored in Consiglio et al. (2017) where crowdedness decreases the sense of control of the person. The loss of control then leads the person to find a way to restore it through information sharing or engaging in WOM. Although the study already provides meaningful insights, the need to restore control might not be the only factor influencing people in crowded settings to engage in WOM.

This study provides further research by exploring another set of questions such as: Is there a general preferred WOM medium in crowded settings? Would it be offline or eWOM? What factors might this depend on? Since Social Network Sites (SNSs) have grown in popularity (Chen et al. 2011), there is an opportunity for research in whether eWOM through SNSs could change the

dynamics of WOM. Andrews et al. (2015) studied how consumers in a crowded subway are twice as likely to resort to mobile immersion to get away from the perceived crowdedness.

Observing offline WOM and eWOM in crowdedness can have several managerial implications. Managers and marketers should learn more about customers. Such as, understanding a consumer's' day to day life in order to provide valuable and personalized offers relevant with the consumer's preferences (Andrews et al. 2015).

While the few previously mentioned studies help shed some light on the effects of crowdedness on WOM, this paper wants to explore further. There is no previous research linking the concepts of crowdedness, control, comfortability and the personality trait of extraversion in WOM. Through my study, I intend to find whether WOM or eWOM are preferred in crowdedness.

Literature Review

Word of Mouth Marketing

According to McKinsey (2010), WOM is the factor behind 20-50% of purchase decisions. Consumers nowadays prefer to resort to community opinion leaders for advice, instead of marketing campaigns from companies (Feick and Price 1987). Positive WOM occurs when testimonials or any other communication is in line with the company's desires (Buttle 1998). In contrast, negative WOM can occur when customer expectations and perceptions are not met (Buttle 1998).

WOM can be defined further as online (eWOM) and offline WOM. Both online and offline WOM will be observed in this study, since I want to know if there is a preference in the event of crowdedness. Offline WOM can be considered traditional WOM. While eWOM is any positive or negative statement made on the Internet about a product or company (Hennig-Thurau et al 2004). According to Keller and Libai (2009) more than 75% of WOM happens offline. eWOM occurs on many channels, such as social media, websites and virtual consumer communities (Dwyer 2007).

Furthermore, eWOM has grown considerably in recent years through social media and online communities (Hajli 2014).

eWOM through social network sites (SNSs) is a recent development (Chu and Kim 2011). The importance of eWOM in SNSs has grown, as social media has become more influential (Chen et al. 2011). Mangold and Faulds (2009) found that consumers perceive social media as a more reliable source about brands than any marketing campaign. By sharing useful information in SNSs, consumers can help their social connections by providing reviews, recommendations or giving advice on a specific topic (Chu and Kim 2011). This study will focus only on eWOM through SNSs, due to these recent studies about SNSs mentioned above.

The Environment and WOM

Bennett and Bennett (1970) state that “*all social interaction is affected by the physical container in which it occurs*”. Therefore, WOM would also be affected by the environment in which it occurs. Only a few studies explore WOM and the environment, such as Machleit et al. (2000) and Hui et al. (2013). The latter, used real time mobile promotions in grocery stores which increased the shoppers’ travel distance and unplanned spending as they reacted to the promotions they received. Other environmental aspects have been researched, such as density and crowding (Machleit et al. 2000 and Stokols 1972). However, this study will focus specifically on crowdedness.

Crowdedness

Crowdedness will be defined as a state of psychological stress when the person notices the density in the surrounding environment (Stokols 1972). Crowdedness does not only affect people’s emotions or reactions to the situation (Hui and Bateson 1991) but also consumer behavior and the customer journey (Maeng et al. 2013). Moreover, crowdedness can be positive or negative. There is extensive research about the negative aspects of crowdedness. For example, high crowded settings obstruct enjoyment (Brehm 1966). In a retail setting, crowdedness can lead to negative feelings

(Machleit et al. 2000). Furthermore, in the service environment, crowdedness can decrease the feeling of pleasure (Hui and Bateson 1991). Nevertheless, crowdedness can be beneficial for certain businesses or industries (Foxall and Goldsmith 1994). For instance, crowded restaurants are perceived as a good crowd since it might signal popularity or quality (Tse et al. 2002).

Personality Traits and WOM

Personality traits have extensive research in several areas. Moreover, there is also past research on personality traits and WOM. For instance, the effect of personality on motivation to engage in eWOM (Yoo and Gretzel 2011). Li and Chignell (2010) showed that creating content online is different for people with different personalities. Moreover, Moore and McElroy (2012) showed that personality explains the way people use Facebook and the content they create.

The most widely accepted framework for personality is the Five Factor Model (FFM) also known as the Big Five Framework. The five factors are openness, conscientiousness, extraversion, agreeableness and neuroticism (Goldberg 1992). Although all factors could provide valuable research, I will only explore extraversion and its counterpart introversion.

Extroverts tend to be more sociable and eager to form connections with others (Mooradian and Swan 2006). Therefore, extroverts could be more likely to engage in WOM since WOM involves communicating with others. Prior research already points extraversion and introversion as possible important factors in WOM behavior. Correa, Hinsley and Gil (2009) state that people with higher extraversion scores use social media more. Hamburger and Ben-Artzi (2000) also found that extraverts use the Internet more for leisure activities when compared to neurotic persons.

Personality traits have been used for crowding research. Paulus (2015) explored introversion and housing situation of college students. Introverted students were more likely to live at home than at college accommodation. Nevertheless, there are no current research papers linking the extraversion/introversion factor in a crowded setting and WOM engagement.

Hypotheses Development

The first set of hypotheses test comfortability in crowded settings and willingness to engage in WOM or eWOM. All participants are Nova SBE students that most likely already have knowledge of crowded areas on campus. Thus, all participants self-selected their attendance knowing it could be potentially crowded (Tse et al. 2002). Therefore, even though someone might not like crowded environments, familiarity or identification with the crowd might contribute to reducing negative feelings (Novelli et al. and Stokols 1972). Moreover, crowding tolerance is different from person to person (Evans, Lepore and Allen 2000). Furthermore, crowding tolerance can also vary depending on the setting (Tse et al. 2002).

H1a: In a crowded setting, people that feel comfortable will engage in offline WOM.

H1b: In a crowded setting, people that feel uncomfortable will engage in online WOM (eWOM).

The second set of hypotheses tests the possible relation between WOM and if whether the person engaging in WOM is accompanied or alone in the crowd. I suggest that a person surrounded by friends or colleagues will be more likely to engage in offline WOM. Previous research shows how WOM can be used as social currency (Hughes 2005). Therefore, talking to others about something new will provide the group with a conversation topic and an added feeling of competence (Peluso et al. 2016, Berger and Schwartz 2011). A person alone in the crowd might not be eager to approach anyone or even strangers with conversation.

H2a: In a crowded setting, people that are accompanied by others will prefer to engage in offline WOM as compared to those unaccompanied.

H2b: In a crowded setting, people who are alone will prefer to engage in eWOM.

The third set of hypotheses involve the extraversion and introversion factors into the crowded setting. I argue that this personality trait could possibly influence WOM and eWOM in crowded

settings. As elaborated before, extroverts tend to seek social interactions more than introverts (Wang et al. 2012, Yoo and Gretzel 2011). Extroverts also use social media more often (Correa et al. 2009). These previous studies lead to hypothesize that extroverts would engage in WOM more than introverts. Participants of the study were presented with both options to share online or offline WOM. Therefore, extroverts would most likely prefer offline WOM since it provides immediate and visible social interactions with others. On the contrary, introverts would prefer SNSs eWOM since it gives the opportunity of mobile immersion and engaging in WOM without having to physically interact with others. By sharing WOM in SNSs, introverts can also target the people they want to interact with. Although the latter regarding introverts contradicts previous research on how extroverts use social media more, it is important to remember that previous research does not consider crowdedness. Therefore, by introducing crowdedness and the option of online and offline WOM, an introvert might prefer online WOM since it does not include immediate social interactions in the crowd.

H3a: In a crowded setting, people with high introversion scale scores (extroverts) will prefer to engage in offline WOM.

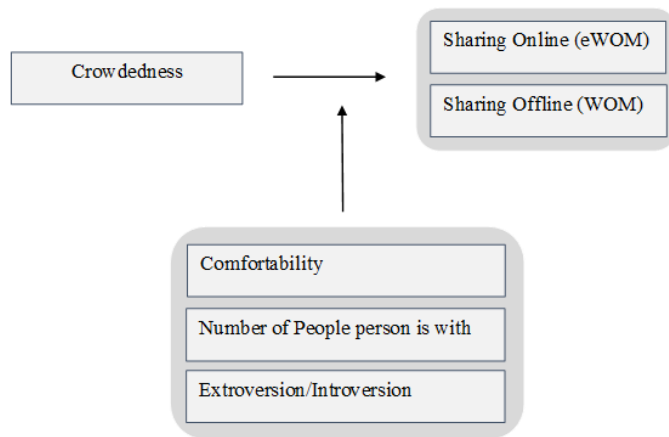
H3b: In a crowded setting, people with low introversion scores (introverts) will prefer to engage in eWOM.

Method and Study

Research Model

Figure 1 presented below introduces the research model. In all the formulated hypotheses crowdedness serves as the independent variable. The dependent variables are represented by the options to engage in offline WOM or eWOM. Furthermore, the hypotheses count with 1 moderating variable in each of the 3 sets represented by comfortability, number of people the person is with and extraversion/introversion.

Figure 1: Research Model



To test all hypotheses, a survey was conducted at the Nova SBE campus in Lisbon, Portugal. A total of 98 students were approached, with 69 students agreeing to participate (70.41%). A total of 68 complete surveys were recorded and 1 incomplete survey has been eliminated from the study. The study took place in a popular courtyard where crowdedness levels vary throughout the time of the day and day of the week. The courtyard has space for about 96 seated persons in 12 benches with 8 persons per bench. It is a popular space for meetings, taking breaks and having meals. This naturalistic setting was chosen to observe an organic crowd. However, other settings and tests could be performed such as creating a crowded environment and inviting a predetermined group of participants.

To observe varying levels of crowdedness, the study was conducted during different hours and days. Each time the survey was conducted, I approached each table, so as to approach students randomly. I then proceeded to provide a laptop with the online anonymous link to the survey that needed to be completed for the test.

The survey was divided into 4 sections. Section 1 included questions about the participant's current environment. The purpose of this section was to find what were the respondents perceptions

of the environment around them and how they felt in terms of comfortability and control of the situation.

In Section 2, participants were asked to watch Burger King's recent marketing campaign during the American National Bully Prevention month for 2017. The video shows hired teenage actors who pretended to bully another teenage actor at a Burger King restaurant. Real customers were filmed watching the teenager being bullied. At the same time, at Burger King's kitchen, one employee "bullied" a Whopper Jr. burger by calling it names and punching it. These "bullied" burgers were then wrapped and served to clients at the same store. 95% of the clients complained about their punched burgers, while only 12% complained about the teenager being bullied.

This advertisement was chosen for the following reasons. Firstly, according to Berger and Milkman (2012) content that increases arousal should boost social transmissions. They further state that positive content is likely to be shared more because it reflects on the person. Therefore, people would want to share Burger King's anti-bullying campaign to show others how they themselves are against bullying. Secondly, this campaign was chosen due to its popularity on YouTube (752K views) and on Burger King's official Facebook page (565K views). These numbers show how many people were curious to watch and share it. However, these estimates do not consider re-sharing or re-posting from other pages, articles, news stories and blogs that brought even more attention to the campaign. After watching the video, participants were asked whether they would share this video on social media and/or talk about it with others. They were also asked if they would perform any of the actions in the moment and/or afterwards.

In Section 3, participants were asked to respond to a modified version of the introversion scale by James C McCroskey (1997). McCroskey's introversion scale is derived from the extensive list of items provided by Eysenck (1970,71). McCroskey selected 18 items from this list and developed 12 questions that are meant to test introversion while the remaining 6 questions measure

neuroticism. McCroskey constructed his scale this way so that the participant would not know what the scale was testing. For this study, only the 12 introversion questions were used to keep the survey completion time within 10 minutes. Furthermore, the 12 questions were rephrased into statements so as to apply a 7-point Likert-scale ranging from strongly disagree to strongly agree. Some of the modified statements include: “I like to mix socially with people” and “I am a happy-go-lucky individual”. After completing the introversion scale participants were assigned an average score of their responses.

The last section was composed of demographics questions of age, gender, nationality and occupation. Demographics were not considered in any of the six formulated hypotheses. However, they were included in the survey to find out if they affect the study in any way. Moreover, to observe whether demographics could have potential for future research.

Results

Multiple regression analyses followed by a correlation analysis were performed to test the relationships between variables. From the sample of 68, 5 respondents had above average response times ($M=8.04$, $SD=3.56$). Therefore, the statistical calculations were run once again excluding these 5 extreme participants. This resulted in two sample sizes of ($n=68$) and ($n=63$) where all calculations regard both samples. The extended response time might signal a difference of attention or engagement to the survey. Hence, it is important to consider both samples to find similarities and differences.

Regarding sample statistics, it is important to observe the dependent variables of WOM and eWOM. Offline WOM was slightly preferred ($M=5.54$, $SD=1.19$) over SNSs *eWOM* ($M=5.02$, $SD=1.82$) for the sample ($n=68$). For the smaller sample ($n=63$), slight changes occurred. However, offline WOM was still preferred ($M=5.57$, $SD=1.25$).

A regression analysis was performed for each hypothesis with the goal to find possible relationships between the variables. As can be observed in Table 1, none of the hypotheses show significance. However, the small sample size might be the reason for these results. An online sample size calculator suggested that considering a 95% confidence interval with a 5% margin of error, a sample size of 349 respondents would have provided statistically significant results for a population of about 3,715 Nova SBE students.

Table 1
Regression Analysis for both sample sizes n=68 and n=63

	n=68			n=63		
	Beta	t	Sig.	Beta	t	Sig.
H1a: share offline now						
Crowdedness	0.549	1.044	0.300	-0.107	-0.302	0.764
Comfort	0.576	1.496	0.140	0.131	0.529	0.599
(crowd)(comfort)	-0.137	-1.456	0.150	-0.037	-0.588	0.559
H1b: share online now						
Crowdedness	0.488	0.644	0.522	-0.154	-0.281	0.779
Comfort	0.525	0.946	0.347	0.020	0.052	0.959
(crowd)(comfort)	-0.121	-0.900	0.372	-0.026	-0.274	0.785
H2a: share offline now						
Crowdedness	0.071	0.388	0.700	-0.070	-0.403	0.689
Number of people with	0.560	1.924	0.059	0.485	1.743	0.087
(Crowd)(Num.People)	-0.134	-1.866	0.067	-0.117	-1.704	0.094
H2b: share online now						
Crowdedness	-0.087	-0.328	0.744	-0.203	-0.752	0.455
Number of people with	0.271	0.642	0.523	0.248	0.570	0.571
(Crowd)(Num.People)	-0.053	-0.508	0.613	-0.049	-0.460	0.647
H3a: share offline now						
crowdedness	0.840	1.320	0.192	0.756	1.381	0.173
introversion score	0.271	0.491	0.625	0.225	0.475	0.636
(crowd)(int.score)	-0.207	-1.593	0.116	-0.213	-1.896	0.063
H3b: share online now						
crowdedness	0.727	0.747	0.458	0.890	0.936	0.353
introversion score	0.849	1.005	0.319	0.987	1.202	0.234
(crowd)(int.score)	-0.190	-0.935	0.344	-0.247	-1.264	0.211

Regressions Interpretation

H1a and H1b show no significant results. As expected, most participants felt either comfortable in the crowd (38.24%) or somewhat comfortable (26.47%) when observing the survey data. Moreover, the sample statistics show comfortability as ($M=5.41$, $SD=1.12$) for ($n=68$) and ($M=5.38$, $SD=1.19$) for ($n=63$).

Regarding sample ($n=68$) and hypothesis H1a, the variables of *comfort* and (*crowdedness*)(*comfort*) show results near significant values of ($p=0.140$) and ($p=0.150$) respectively. Therefore, it can be argued that people that feel comfortable in the crowded setting will be likely to interact with those around them, which would be in line with the reasoning behind the formulation of the hypothesis. Whereas an uncomfortable person might seek ways to reduce uncomfortableness or to escape it. As Andrews et al. (2015) showed, in a crowded subway, people seek mobile immersion. The results approaching significance disappear with the smaller sample size meaning that survey completion time should be observed more carefully for future research. Moreover, a far larger sample size would still be recommended.

Considering hypothesis H1b, neither sample size approximate significant results. Furthermore, the variable of *crowdedness* is inversely related to sharing eWOM and WOM. As crowdedness increases, engaging in eWOM and WOM possibly decreases. Students in this specific study setting were somewhat familiar with the crowd. Therefore, they might prefer to interact with people around them in other ways instead of WOM. Moreover, they might prefer to not engage in WOM because of other factors not considered in the study such as mood, anxiety, level of interest on the ad and noise levels in the crowd. These factors that were not included, could also affect the results of all other remaining hypotheses.

For hypotheses H2a and H2b, there were also no significant relationships between variables in both sample sizes. Nevertheless, the regression analysis performed for H2a is close to significant in

sample $n=68$ ($p=0.059$) and sample $n=63$ ($p=0.087$) for the variable of the number of people you are with. Moreover, the interacting variable of (*number of people with*) (*crowdedness*) also approximates significant results. The proximity to significance suggests once more, that increasing the sample size could make this result significant. By adjusting the study, a participant in a crowded setting that is with a group of people within the crowd, would be likely to engage in offline WOM at the moment.

In the smaller sample of ($n=63$) crowdedness becomes inversely related to engaging in offline WOM. This effect is replicated in H2b for both samples as crowdedness becomes inversely related to sharing eWOM, while holding the number of people who are with you constant. As crowd increases, less people would want to engage in WOM. Again, this could possibly occur as people would want to have other types of conversations with people, instead of talking about this specific ad. As an alternative, as crowdedness rises people might not want to engage in WOM due to factors not observed in this study.

Considering H3a and H3b, no significance was found. However, for H3a, the variable of (*crowdedness*)(*introversion*) has a close to significant result in both samples ($p=0.116$ and $p=0.063$). This result further clarifies the idea that an overall larger sample size would provide significant results. With a larger sample, hypothesis H3a would possibly line up with past research on extraverts being more prone to social interactions (Wang et al. 2012, Yoo and Getzel 2011 and Judge et al. 1999).

A correlation analysis was also performed to further observe the strength of linear relationships amongst variables (Burns and Burns 2008). Several correlations for both samples were found as presented below in Table 2.

Table 2
Correlation Matrix
n=68

Variable	1	2	3	4	5	6	7	10	11	12	13
Crowdedness	-										
Comfort		-									
Number of People			-								
Share Now (eWOM)				-							
Share Later (eWOM)				.808**	-						
Share Now (WOM)				.434**	.429**	-					
Share Later (WOM)	-.304*			.351**	.602**	.527**	-				
Introversion Score						-.354**	-.325**	-			
cxc	.867**	.421**					-.282*		-		
cxn	.240*		.982**						.246*	-	
cxint	.915**					-.353**	-.363**	.502**	.827**	.267*	-

n=63

Variable	1	2	3	4	5	6	7	10	11	12	13
Crowdedness	-										
Comfort		-									
Number of People			-								
Share Now (eWOM)				-							
Share Later (eWOM)	-.257*			.873**	-						
Share Now (WOM)	-.359**			.414**	.364**	-					
Share Later (WOM)	-.334**			.436**	.568**	.551**	-				
Introversion Score						-.439**	-.254*	-			
cxc	.854**	.418**				-.322**	-.295*		-		
cxn			.984**							-	
cxint	.908**			-.267*		-.513**	-.411**	.492**	.806**		-

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.05 level (2-tailed).

Correlations Interpretation

Unsurprisingly, the dependent variables show correlation amongst each other. The options of sharing offline and online WOM at a later time which were part of the survey, were also included. Unsurprisingly, they also correlate with the dependent variables. This can occur because if a person shares now on social media they might also search for the video at a later time and share then, if the ad caused a memorable impression. On the other hand, if a person shares offline WOM now, they could also share offline WOM later. Moreover, if the person is in a crowded setting, they could possibly engage in both eWOM and WOM simultaneously.

The *introversion score* has an inverse relationship with sharing offline WOM. This corresponds with the rationale behind hypothesis H3b. Introverts are not as eager as extroverts for social interactions. Thus, an introverted individual would not be likely to engage in offline WOM in crowded settings. Although the regression analysis for hypothesis H3a did not show significance, the correlation shows that the relationship does exist. Perhaps with a different crowd or a larger sample the hypothesis might have shown significant relationship. Moreover, the variable Crowdedness and introversion score, also shows the same pattern with a negative correlation to sharing offline WOM.

For the correlation analysis of the smaller sample (n=63), some changes occur. As can be observed by these changes, increasing or reducing the sample size by a few participants provides slight changes in the regressions and correlations.

Additional Findings

While performing the correlation analysis, correlations were found in variables that were not included in any of the hypotheses but that were nevertheless recorded throughout the survey.

The variable *control* was recorded in the survey. The correlation analysis shows a relationship with the variable introversion score. This relationship infers that as perceived control increases, the person's introversion score approximates extrovert scores. On the contrary, as perceived control decreases the person's introversion score approximated introvert scores. This relationship appears to be in line with past research on extraversion, since extraverts are sociable, talkative and able to make friends easily (Wang et al. 2012, Yoo and Gretzel 2011).

The variable *gender* was recorded for general demographics, but not intended for study purposes. However, the variable did show correlation with the introversion score. Nevertheless, these results might be specific to this sample and this specific study. Lynn and Martin (1997) studied extraversion in 37 countries where 30 countries reported males being more extraverted than females.

However, in 5 of the countries females showed significantly higher scores for extraversion. Other factors could also be influential such as culture, age group and more.

Managerial Implications

Observing and studying offline WOM is complicated since it occurs mostly as private conversations that are not recorded as eWOM can be (Godes and Mayzlin 2004). This study provides some useful information regarding the continued importance of offline WOM. Interestingly enough, the hypotheses related to offline WOM were the ones that approached significance. This result is in line with previous research on how the majority of WOM interactions still occur offline (Keller and Libai 2009).

Moreover, by studying WOM in crowdedness, managers and marketers can have a further understanding of consumer behavior and everyday activities regarding crowded environments. As Kim et al. (2011) state, the ability to reach consumers at anytime and anywhere can offer several opportunities. Marketers could be able to reach customers in a crowded environment with real-time targeted communications. The Internet of Things (IoT) is already providing personalized real-time communications in retailing. For instance, retail stores can communicate with customers in real-time as they enter the store and send them personalized promotions or product recommendations (Accenture-Gregory 2015). However, it is important for marketers to be able to distinguish when are real-time targeted ads welcome. For instance, in a crowded concert or restaurant, ads might not lead to positive outcomes because it might lead to a feeling of invasion of privacy (Andrews et al. 2015).

Limitations

The study considered crowdedness as independent of introversion or extraversion. However, one can assume that extroverted people might be likely to frequent more crowded places. Therefore,

when considering naturalistic settings, extraverts could make up a considerable number of participants.

Furthermore, crowdedness for each participant was self-reported. Thus, participants responses depended on what each one believed was the environmental crowdedness level of the location. However as past research indicates, there is no widely preferred method for recording crowdedness.

Moreover, there might be some unobserved characteristics or variables that are correlated with crowdedness that were not observed. This could be addressed with experimental research such as assigning a predetermined number of participants to crowded settings. However, a large sample size might also be needed in an experimental setting.

Lastly, the study was based on hypothetical intentions regarding WOM and SNSs eWOM. The participants were only asked if they would share the video online or talk about it with others. A study based on measuring real WOM interactions in crowdedness and other moderating variables, could provide further interesting results.

Further Research

The cultural aspect in crowdedness was not included in this study. However, culture can influence crowdedness (Pons et al. 2006). The study was conducted in Portugal, a collectivist country with a score of 27% individualism (Hofstede Insights 2017). Moreover, most respondents were Portuguese (83.82%). Therefore, in a crowd, they might not need to react to crowdedness (Peluso et al. 2016). Hence, it is possible that the cultural background of a person could influence WOM in crowdedness. Furthermore, the cultural composition of the crowd and not the individual, could also affect WOM in crowdedness.

Another further research approach, is to study whether WOM in crowdedness is mostly positive or negative. According to Berger & Milkman (2012), negative content is shared less than

positive viral content because it reflects on the person. Therefore, there is possible research in whether a person in a crowd shares or discusses positive messages or negative messages and what other factors might influence both approaches.

Another further question is: Who are the people in a crowd engaging in WOM with? Stokols (1972) states that a person's reaction to a crowd depends on the relationship (if any) with the crowd members. Furthermore, crowds can be experienced positively when composed of in-group members (Schultz-Gambard 1977). Therefore, with this knowledge, marketers could tailor marketing campaigns depending on who people are sharing with.

Conclusion

The purpose of this study was to link the concepts of WOM, crowdedness and personality traits. Although the statistical results of the study did not show significance, the study does provide a look into the relationships and interactions of the three concepts together.

Future research that link the concepts together, could provide theoretical and managerial implications. From a theoretical point of view, future research could further expand the knowledge in consumer behavior and WOM. From a managerial perspective, the knowledge on customer daily activities and interactions both offline and online, would provide managers the ability to be in contact with customers in real time. Furthermore, there would be a gained ability to cater to customers' personalized needs through the new knowledge on WOM drivers.

Previous research and literature regarding the three topics separately, already provides indications about their importance. Moreover, the results from the regression and correlation analyses in this study, clearly demonstrate that further research into the concept of crowdedness in regards to offline and online WOM could provide valuable insights.

References

1. Andrews, Michelle., Xueming, Luo., Zheng, Fang., Anindya Ghose. 2015. "Hyper-Contextual Targeting with Crowdedness." *Marketing Science, Articles in Advance*, pp. 1-17, *INFORMS*.
2. Barasch, Alixandrea., Berger, Jonah. 2014. "Broadcasting versus Narrowcasting: How Audience Size Impacts WOM Valence." *Journal of Marketing Research*, 51(3): 286-99.
3. Bennet, David J., Bennet, Judith D. 1970. *Making the Scene, Social Psychology Through Symbolic Interactionism*, Waltham, MA: Ginn-Blaisdell.
4. Berger, Jonah., Schwartz, Eric. 2011. "What Drives Immediate and Ongoing Word of Mouth?" *Journal of Marketing*, 48(5): 869-80.
5. Berger, Jonah., Milkman, Katherine. 2012. "What Makes Online Content Viral?" *Journal of Marketing*, 49(2): 192-205.
6. Bitner, Mary Jo. 1992. "Serviscapes: The Impact of Physical Surroundings on Customers and Employess." *Journal of Marketing* 56(2): 57-71.
7. Brehm, Jack W. 1966. *A Theory of Psychological Reactance*, New York: Academic Press, Inc.
8. Burns, Robert., Burns, Richard. 2008. *Business Research Methods and Statistics Using SPSS*, London: SAGE Publications, Inc.
9. Buttle, Francis A. 1998. "Word of Mouth: Understanding and Managing Referral Marketing." *Journal of Strategic Marketing* 6: 241-54.
10. Chen, Yubo., Fay, Scott., Wang, Qi. 2011. "The Role of Marketing in Social Media: How Online Consumer Reviews Evolve." *Journal of Interactive Marketing*, 25: 85-94.

11. Chu, Shu-Chuan., Kim, Yoojung. 2011. "Determinants of Consumer Engagement in Electronic Word-of-Mouth (Ewom) in Social Networking Sites." *International Journal of Advertising*, 30(1): 47-75.
12. Consiglio, Irene; De Angelis, Matteo; Costabile, Michele. 2017. The Effect of Environmental Crowdedness on Word-of-Mouth. In: Leaving Footprints: Proceeding of the EMAC 46th Conference 2017, 23-26 May, Groningen, the Netherlands, Month 1, p. 79-79.
13. Correa, Teresa., Hinsley, Amber W., Gil, Homero. 2010. "Who Interacts on the Web? The Intersection of Users' Personality and Social Media Use." *Computers in Human Behavior*, 26(2): 247-253.
14. Dwyer, Paul. 2007. "Measuring the Value of Electronic Word of Mouth and its Impact in Consumer Communities." *Journal of Interactive Marketing*, 21(2): 63-79.
15. Evans, Gary W., Lepore, Stephen J., Allen, Karen M. 2000. "Cross-Cultural Differences in Tolerance for Crowding.", *Journal of Personality and Social Psychology*, 79(2): 204-210.
16. Eysenck, Hans J. 1970. *Readings in Extraversion-Introversion (Vol.1)*, New York, Wiley-Interscience.
17. Feick, Lawrence F., Price, Linda L. 1987. "The Market Maven: A Diffuser of Marketplace Information." *Journal of Marketing*, 51(1): 83-97.
18. Foxall, Gordon R., Goldsmith, Ronald E., Brown, Stephen. 1994. *Consumer Psychology for Marketing*, New York, Routledge.
19. Godes, David B., Mayzlin, Dina. 2004. "Using Online Conversations to Study Word-of-Mouth Communication." *Marketing Science*, 23(4): 545-60.
20. Goldberg, L. R. 1992. "The Development of Markers for the Big Five Factor Structure." *Psychological Assessment*, 4: 26-4.

21. Gregory, Jonathan. 2015. "The Internet of Things: Revolutionizing the Retail Industry." Accenture Strategy.
22. Hajli, M Nick. 2014. "A Study of the Impact of Social Media on Consumers." *International Journal of Market Research*, 56(3): 387-404
23. Hamburger, Y. A., Ben-Artzi, E. 2000. "The Relationship Between Extraversion and Neuroticism and the Different Uses of the Internet." *Computers in Human Behavior* (16): 441-9.
24. Harrison-Walker, L. Jean. 2001. "E-complaining: A Content Analysis of an Internet Complaint Forum." *Journal of Services Marketing*, 15(5): 397–412.
25. Hennig-Thurau, Thorsten., Gwinner, Kevin P., Walsh, Gianfranco., Gremler, Dwayne D. 2004. "Electronic Word of Mouth via Consumer-Opinion Platforms: What Motivates Consumers to Articulate Themselves on the Internet?" *Journal of Interactive Marketing*, 18(1): 38-52.
26. Hofstede. 2017. Hofstede Insights
27. Hughes, Mark. 2005. *Buzzmarketing*, New York, Penguin.
28. Hui, Michael K., Bateson, J.E. 1991. "Perceived Control and the Effects of Crowding and Consumer Choice on the Service." *Journal of Consumer Research*, 18(2): 174-184.
29. Hui, Sam K., Inman, Jeffrey., Huang, Yanliu., Suher, Jacob. 2013. "The Effect of In-Store Travel Distance on Unplanned Spending: Applications to Mobile Promotion Strategies." *Journal of Marketing* 77(2): 1–16.
30. Iacobucci, Dawn., Ostrom, Amy., Grayson, Kent. 1995. "Distinguishing Service Quality and Customer Satisfaction: The Voice of the Consumer." *Journal of Consumer Psychology*, 4, 277–303.

31. Judge, Timothy A., Higgins, Chad A., Thoresen, Carl J., Barrick, Murray R. 1999. "The Big Five Personality Traits, General Mental Ability, and Career Success Across the Life Span." *Personnel Psychology*, 52: 621-652.
32. Keller, Ed., Barak, Libai. 2009. "A Holistic Approach to the Measurement of WOM," presentation at ESOMAR Worldwide Media Measurement Conference, Stockholm (May 4–6).
33. Kim, JB., Albuquerque, P., Bronnenberg, BJ. 2011. "Mapping Online Consumer Search." *Journal of Marketing Research*, 48(1): 13–27.
34. Li, J., Chignell, M. 2010. "Birds of a Feather: How Personality Influences Blog Writing and Reading." *International Journal of Human-Computer Studies*, 68(9): 589-602.
35. Lynn, R., Martin, T. 1997. "Gender Differences in Extraversion, Neuroticism and Psychoticism in 37 Nations." *Journal of Social Psychology*, 137(3): 369-373.
36. Machleit, Karen A., Eroglu, Sevgin A., Mantel, Susan Powell. 2000. "Perceived Retail Crowding and Shopping Satisfaction: What Modifies This Relationship?" *Journal of Consumer Psychology*, 9(1): 29-42.
37. Maeng, Ahreum., Tanner, Robin J and Dilip Soman. 2013. "Conservative When Crowded: Social Crowding and Consumer Choice." *Journal of Marketing Research*, 50(6): 739-752.
38. Mangold, W.Glynn., Faulds, David J. 2009. "Social media: the new hybrid element of the promotion mix." *Business Horizons*, 52(4): 357–365.
39. McCroskey, James C. 1997. *Self-report Measurements*. In J. A. Daly, et al. Avoiding Communication: Shyness, Reticence, & Communication Apprehension, Cresskill, NJ, Hampton Press.
40. McKinsey. 2010. "A New Way to Measure Word-of-Mouth Marketing." McKinsey Quarterly.

41. Mooradian, Todd A., Swan, Scott K. 2006. "Personality-and-Culture: The Case of National Extaversion and Word-of-Mouth." *Journal of Business Research*, 59 (6): 778-785.
42. Moore, K., McElroy, J. C. 2012. "The Influence of Personality on Facebook Usage, Wall Postings, and Regret." *Computers in Human Behavior*, 28: 267-274.
43. Novelli, David., Drury, John., Reicher, Stephen., Stott, Clifford. 2013. "Crowdedness Mediates the Effect of Social Identification on Positive Emotion in a Crowd: A Survey of Two Crowd Events." *PLoS One*, 8(11)
44. Paulus, Paul B. 2015. *Psychology of Group Influence: Second Edition*. Psychology Press
45. Peluso, Alessandro M., Bonezzi, Andrea., De Angelis, Matteo., Rucker, Derek D. 2016. "Compensatory Word of Mouth: Advice as a Device to Restore Control." *International Journal of Research in Marketing*, 34(2017): 499-515.
46. Pons, F., Laroche, M., Murali, M. 2006. "Consumer Reactions to Crowded Retail Settings: Cross-Cultural Differences Between North American and the Middle East." *Psychology and Marketing*, 23(7): 555-572.
47. Schultz-Gambard, Jürgen. 1977. "Social Determinants of Crowding," in Human Consequences of Crowding, Mehmet R. Giirkaynak and William A. LeCompte, eds. New York, Plenum Press: 161-67.
48. Stokols, Daniel. 1972. "On the Distinction Between Density and Crowding: Some Implications for Future Research." *Psychological Review*, 79 (3): 275-77.
49. Sundaram, D. S., Mitra, K., Webster, C. 1998. "Word of Mouth Communications: A Motivational Analysis." *Advances in Consumer Research*, (25): 527-531.
50. Tse, A., Sin, L., Yim, F. 2002. "How a Crowded Restaurant Affects Consumers' Attribution Behavior." *Hospitality Management*, 21: 449-454.

51. Wang, J. L., Jackson, L. A., Zhang, D.-J., Su, Z.-Q. 2012. "The Relationships Among the Big Five Personality Factors, Self-Esteem, Narcissism, and Sensation-Seeking to Chinese University Students' Uses of Social Networking Sites (SNSs)." *Computers in Human Behavior*, 28(6): 2313-9.
52. Yoo, Kyung-Hyan., Gretzel, Ulrike. 2011. "Influence of Personality on Travel-Related Consumer Generated Media Creation." *Computers in Human Behavior*, 27(2): 609-621.